FINDING OF NO SIGNIFICANT IMPACT
AND ENVIRONMENTAL ASSESSMENT

Upper North Fork Eagle Creek Helicopter Large Woody Debris Placement

Environmental Assessment Number OR-080-02-05

May 21, 2002

United States Department of Interior
Bureau of Land Management
Oregon State Office
Salem District
Cascades Resource Area

Responsible Agency: USDI - Bureau of Land Management

Responsible Official: Richard Prather, Field Manager
Cascades Resource Area
1717 Fabry Road SE
Salem, OR 97306
(503) 375-5646

For further information, contact: Dave Roberts, Project Leader
Cascades Resource Area
1717 Fabry Road SE
Salem, OR 97306
(503) 375-5672

Abstract: This environmental assessment discloses the predicted environmental effects of one action alternative and one no action alternative for private lands located in Sections 12 and 13 of Township 3 South, Range 4 East and Sections 7, 8,17 and 18 of Township 3 South, Range 5 East, Willamette Meridian, within the Eagle Creek drainage of the Clackamas River. Alternative B is the proposed action. This alternative includes helicopter placement of up to 60 trees and logs to create woody debris jams in North Fork Eagle Creek between approximate river miles 1.5 and 4.5 on Longview Fibre Co. (LFC) lands. Structural stability would be achieved by incorporating at least two trees with lengths of 80-120 feet (with rootwads) into each structure. Trees would be obtained by purchase from LFC with an OWEB grant obtained by the Clackamas River Basin Council and by donation from LFC and Friends of Eagle Creek. Some logs, 40-50 feet in length and up to 32 inch diameter would be contributed by the U.S. Forest Service (USFS). Project planning and design would be done by Bureau of Land Management (BLM) and USFS biologists.

TABLE OF CONTENTS

Page

FINDING OF NO SIGNIFICANT IMPACT

Introduction

The Bureau of Land Management (BLM) has conducted an environmental analysis (Environmental Assessment Number OR-080-02-05) for a proposal to restore instream habitat within the Eagle Creek watershed in Clackamas County. The project would occur within Township 3 South, Range 4 East, Sections 12 and 13, and Township 3 South, Range 5 East, Sections 7, 8,17 and 18, Willamette Meridian.

The BLM is authorized by Section 124 of the Omnibus Consolidated Appropriation Act of 1997 to enter into watershed restoration and enhancement agreements that restore and maintain fish, wildlife, and other biotic resources on private land to benefit these resources on public land within the watershed. The intent of this project is to partner with Longview Fibre Company (LFC), the Oregon Department of Fish & Wildlife (ODFW), the U.S. Forest Service (USFS) and Friends of Eagle Creek (FEC) through the Clackamas River Basin Council (CRBC), to restore instream habitat by helicopter placement of up to 60 trees and logs in North Fork Eagle Creek on LFC lands. The environmental Assessment (EA No. OR080-02-05) is attached to and incorporated by reference in this Finding of No Significant Impact (FONSI) determination.

The project would be located on private industrial timberland. The Northwest Forest Plan does not establish direction or regulation for actions on state, tribal, or private lands (Interagency, 1994). Although there are no relevant Aquatic Conservation Strategy (ACS) standards for discretionary actions by federal agencies on private land, the project is consistent with the Aquatic Conservation Strategy objectives described in the *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (Interagency, 1994). The proposed action conforms with direction described in the attached EA.

The EA and FONSI will be made available for public review from **May 22 to June 21, 2002.** The notice for public comment will be published in a legal notice by local newspapers of general circulation (the Sandy Post), mailed to those individuals, organizations, and agencies that have requested to be involved in the environmental planning and decision making processes and posted on the Internet at http://www.or.blm.gov/salem/html/planning/ea-links.htm

Comments received in the Cascades Resource Area Office, 1717 Fabry Road SE, Salem, Oregon 97306, on or before **June 21, 2002** at 4:00 PM, Pacific Daylight Savings Time, will be considered in making the final decisions for these projects. Office hours are Monday through Friday, 7:30 A.M. to 4:00 P.M., closed on holidays.

Finding of No Significant Impact (FONSI)

Based upon review of the EA and supporting documents, I have determined that the Proposed Action (Alternative B) is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27. Therefore, an environmental impact statement will not be prepared for this project. This finding is based on the following discussion:

A. Context. The proposed action is a site-specific action directly involving approximately 160 acres of Private land that by itself does not have international, national, region-wide, or state-wide importance.

The discussion of the significance criteria that follow applies to the intended action and is within the context of local importance. Chapter 4 of the EA details the effects of the proposed action. None of the effects identified, including direct, indirect and cumulative effects, are considered to be significant.

B. Intensity. The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27.

(1) Impacts may be both beneficial and adverse. Due to the proposed action=s design features, the predicted effects include: **1**/ Helicopter placement of up to 60 trees and logs would increase the large woody debris (LWD) loading level within the stream channel which would **2**/ improve fish habitat quality in approximately two miles of stream on private land upstream of public land, and subsequently **3** / increase fish production throughout the stream. **4**/ Removal of individual trees to be used for the project would create openings in the canopy, which would promote understory growth until the removal of the rest of the canopy in a regeneration harvest. **5**/ Placement of wood would dissipate the energy of high flows and increase water and nutrient retention. **6/** The removal of groups of trees, whether solely for this project or as part of a timber sale would convert the timber stand from a mid seral stage to an early seral stage which would happen soon regardless since the rotation age of timber on private industrial timberlands ranges from 40 to 60 years. **7**/ Soil disturbance and compaction, and loss in soil productivity would be reduced by helicopter removal of trees; and **8**/ no loss in population viability of special status or special attention species is expected (see also significance criteria #9 below). None of the environmental effects disclosed above and discussed in detail in Chapter 4 of the EA and associated appendices are considered significant.

(2) The degree to which the selected alternative will affect public health or safety. Public health and safety were not identified as an issue. The proposed action is comparable to other habitat restoration projects which have occurred within the Salem District with no unusual health or safety concerns.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wild and scenic rivers, or ecologically critical areas. There are no historic or cultural resources, park lands, prime farm lands, wild and scenic rivers, or wildernesses located within the project area (EA Chapter (Ch.) IV section (sec.) A).

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial. This project is cooperative effort with the Clackamas River Basin Council, Longview Fibre, Oregon Department of Fish and Wildlife, the Forest Service, and Friends of Eagle Creek.

The effects of the proposed action on the quality of the human environment were adequately addressed by the interdisciplinary team in the environmental assessment. A disclosure of the predicted effects of the proposed action is contained in Chapter 4 of the EA and associated appendices.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. The proposed action is not unique or unusual. The BLM has experience implementing similar actions in similar areas. The environmental effects to the human environment are analyzed in the EA. There are no predicted effects on the human environment which are considered to be highly uncertain or involve unique or unknown risks.

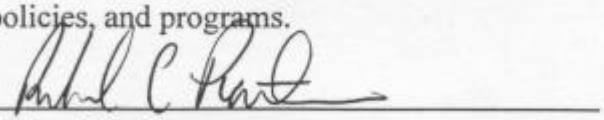
(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The proposed action does not set a precedent for future actions that may have significant effects, nor does it represent a decision in principle about a future consideration. Any future projects will be evaluated through the National Environmental Policy Act (NEPA) process and will stand on their own as to environmental effects.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. The interdisciplinary team evaluated the proposed action in context of past, present and reasonably foreseeable actions. Significant cumulative effects are not predicted. A disclosure of the effects of the selected alternative is contained in Chapter 4 of the EA.

(8) **The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** The proposed action will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will the proposed action cause loss or destruction of significant scientific, cultural, or historical resources (EA Ch. IV sec. A).

(9) **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** Section 7 consultation with the National Marine Fisheries Service (NMFS) for Lower Columbia River steelhead trout and Upper Willamette River chinook salmon has been conducted programmatically under the June 3, 1999, Opinion for the Lower Columbia River Province (OSB99-0108) and the July 28, 1999, Opinion for the Upper Willamette Province (OSB99-0152), both of which have extensions of their respective Incidental Take Statements that are valid through September 30, 2002. The design features of the proposed action are consistent with the Terms and Conditions of NMFS' Biological Opinions (EA Ch.II sec. B and C). Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) for the northern spotted owl has been initiated under the FY2002 Programmatic Disturbance and Habitat Modification Biological Assessments. This project was determined to have no effect on the northern spotted owl due to the timing of the project after the critical nesting season (March 1-July 15) and the project location in North Fork Eagle Creek, where there is a lack of suitable habitat for the spotted owl. No modification of suitable spotted owl habitat would result from this proposal. See Chapter 4 of the EA for the details of the Endangered Species Act (ESA) effect findings for the northern spotted owl.

(10) **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** The proposed action does not violate any known Federal, State, or local law or requirement imposed for the protection of the environment (e.g. Endangered Species Act, National Historic Preservation Act, Clean Water Act, Clean Air Act, and Executive Order 12898 (Environmental Justice)). State, local, and tribal interests were given the opportunity to participate in the environmental analysis process. Furthermore, the proposed action alternative is consistent with applicable laws, policies, and programs.



20 MAY 2002

Richard Prather
Cascades Resource Area Field Manager

Date

ENVIRONMENTAL ASSESSMENT

I. CHAPTER 1 - PURPOSE OF AND NEED FOR ACTION

A. Introduction

(1) Synopsis of Wyden Amendment

Section 124 of the Omnibus Consolidated Appropriation Act of 1997 provides statutory authority to enter into Watershed Restoration and Enhancement Agreements with willing State and local governments, private and non-profit entities, and landowners. This authority has been referred to as the Wyden Amendment or Wyden Authority since it was introduced to the Congress by Senator Ron Wyden of Oregon (Appendix A). These Watershed Restoration and Enhancement Agreements are to provide for protection restoration, and enhancement of fish and wildlife habitat, and other resources on public or private land. Where activities would benefit resources on public land, federal funds could be used on non-federal lands.

(2) Rationale/Justification for the Wyden Authority

a. In watersheds with mixed ownership ecosystem issues such as water quality, wildlife habitat, fish habitat, watershed restoration, and forest health are not limited to federal lands and cannot be solved by federal actions on federal lands alone.
b. Collaboration benefits all participants when scarce financial resources can be leveraged to address highest priority natural resource needs within watersheds.
c. The restoration and enhancement projects off of Federal lands can directly benefit Federal lands.

The purpose of the watershed enhancement program utilizing the Wyden Authority is to implement restoration projects that restore aquatic and terrestrial habitat for a variety of species. These projects are designed to (1) employ local labor; (2) address actions on non-federal lands identified during watershed analyses; (3) support ongoing watershed enhancement projects on federal lands; and (4) benefit federally significant fish, wildlife, and plant species that include listed and proposed species, sensitive and at-risk species, migratory birds, fish, and their critical habitats.

Social and economic goals of this program are directed toward timber dependent communities affected by reduced timber harvests on federal lands within the range of the northern spotted owl.

The ecological goals of the program are to restore ecosystem functions and values to natural conditions and achieve ecosystem restoration goals and objectives in concert with other governmental watershed restoration programs in the area covered by the Northwest Forest Plan.

Additional program benefits and objectives include encouraging partners (e.g., soil and water conservation districts, watershed councils, private individuals) to promote environmental education experiences and to foster long-term stewardship of natural resources in the Willamette Province. This program directly implements a portion of the Oregon Plan for Salmon and Watersheds by linking federal and private restoration activities.

B. Purpose of and Need for Action

The intent of this project is to partner with Longview Fibre Co. (LFC), the Oregon Department of Fish & Wildlife (ODFW), the U.S. Forest Service (USFS) and Friends of Eagle Creek (FEC) through the Clackamas River Basin Council (CRBC) to restore habitat complexity to portions of North Fork Eagle Creek that are currently in a severely simplified state as a result of past timber harvest and stream cleaning activities. The proposed project was evaluated using the Minimum Requirements and Evaluation Criteria outlined in Instruction Memorandum No. 97-66 (USDI, 1997) and determined to have a benefit to biological resources on public lands. The project is a cooperative between the CRBC, LFC, ODFW, USFS, FEC and the BLM through cost-sharing and contribution of goods and services. Fish species that may be affected by the proposed project include:

(1) Lower Columbia River steelhead trout (federally listed: threatened)
(2) Upper Willamette River chinook salmon (federally listed: threatened)
(3) Lower Columbia River/SW Washington cutthroat trout (proposed for federal listing)
(4) Lower Columbia River coho salmon (state listed: threatened)

The BLM, in conjunction with other Federal land agencies, is directed to conduct Watershed Analysis and restoration projects to aid in the recovery of water quality and aquatic, riparian, and terrestrial habitats. This guidance comes directly from *Salem District Resource Management Plan* (RMP), *Environmental Impact Statement* (EIS) and its *Record of Decision* (ROD) (BLM, 1995). The *Eagle Creek Watershed Analysis* (WA) provides a landscape level analysis for the project area. This project is directly related to management recommendations from that analysis (WA pp. 97, 103) and is located on private land on which management is subject to the Oregon Forest Practices Act and the Oregon Plan for Salmon and Watersheds.

The WA (1995) identified conditions upon which to focus initial restoration efforts within the watershed. Among identified conditions was reduced in-channel habitat complexity on BLM and private lands in several subwatersheds including the North Fork subwatershed.

The goals of the proposed project are to:Increase large woody debris loading levels in N.F. Eagle Cr. to trap gravel, wood and nutrients, dissipate the energy of high flows, increase habitat complexity and provide refugia for adult and juvenile fish, specifically steelhead and cutthroat trout and coho and chinook salmon.

C. Issues / Other Elements of the Environment

(1) Scoping: The proposed action was listed in the April 2002 edition of the quarterly *Salem District Project Update* which was mailed to over 1,000 addresses.

(2) Issues: No major issues were identified.

(3) Other Elements of the Environment: The Affected Environment (Chapter 3) and Environmental Effects (Chapter 4) will analyze the following elements of the environment: Aquatic Habitat/Fisheries - Including T/E Species, Soils, Hydrology/Water Quality, Vegetation - Including T/E Species, Terrestrial Wildlife - Including T /E Species and Cultural Resources. These resources were not identified as major issues but are subject to environmental analysis.

II. CHAPTER 2 - ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. No Action Alternative

Under this alternative the proposed project would not be implemented. Anticipated effects, both positive and negative, would not be realized.

B. Proposed Action

The proposed action is to place up to 40 trees with rootwads attached, 18 to 22 inches diameter at breast height (dbh) and 80 to 120 feet in length, and up to 20 logs 40-50 feet long and up to 32 inches in diameter at up to 15 sites in North Fork Eagle Creek. The attached map (Appendix C) shows the location of the project area. The logs would create debris jams and woody complexes, and serve as traps for bedload materials, woody debris and nutrients. The logs would not be artificially secured to the bed or banks of the stream, but would be allowed to interact naturally with the stream system. Stability of the debris jams would come from the size of the material used, in combination with the designs of the placement sites. At each structure site, at least two pieces would be used with lengths of 80 feet or more, with rootwads attached.

Trees used for the project would be obtained by purchase from LFC with funds obtained in an OWEB grant applied for by the CRBC, as well as from donations by LFC and FEC. Logs used for the project would be contributed by the USFS. USFS logs are from a blowdown salvage sale which was defaulted on by the purchaser. The blowdown event occured in 1997 in the Upper Collowash watershed. After the salvage sale failed, the logs were flown to a landing in 2001 where they are currently stockpiled for use in instream restoration projects.

Staging of the logs would be accomplished in July, 2002. Helicopter placement of logs in N.F. Eagle Creek would be accomplished in August or September, 2002, depending on availability of a heavy-lift helicopter. Selected riparian hardwoods would be felled at some of the placement sites to allow visibility of the placement sites for the helicopter pilot.

C. Additional Design Features / Mitigation Measures

(1) Proposed project would comply with the Oregon Division of State Lands General Authorization for Fish Habitat Enhancement and with the U.S. Army Corps of Engineers Regional General Permit for Stream Restoration.

(2) Any in/near stream work involving heavy equipment is subject to State and Federal Law governing petroleum spill prevention and cleanup. These include Oregon Administrative Rules (OAR) 340, Division 108, Oil and Hazardous Materials Spills and Releases (DEQ), and OAR 629-57-3600, Petroleum Product Precautions, and Oregon Forest Practices Act.

(3) Proposed project and its construction activities would be in conformance with the Oregon Forest Practices Act and the Oregon Plan for Salmon and Watersheds.

(4) Best Management Practices and Oregon Plan for Salmon and Watersheds aquatic restoration criteria will be adhered to through all project activity, in addition to criteria specified above, the following general guidelines will be followed.

(5) Natural materials used in the restoration program will be either donated, purchased or salvaged. Logs, rootwads, tree tops, and boulders will be obtained from private or federal lands.

III. CHAPTER 3 - AFFECTED ENVIRONMENT

This section describes the environmental components that may be affected by the Proposed Action or No-action alternative being analyzed. This section does not address the environmental effects, but rather acts as the baseline for comparisons in Chapter IV - Environmental Effects.

A. Location

The project area is located approximately 3-5 miles northeast of Estacada, Oregon. The legal descriptions of the log source areas are T. 3S, R. 4E, Sec. 13 and T. 3S, R. 5E, Secs. 17 & 18. The legal descriptions of the instream wood placement sites are T. 3S, R. 4E, Sec. 12 and T. 3S, R. 5E, Secs. 7, 8 & 18.

B. Aquatic Habitat/Fisheries - Including T/E Species

The instream habitat is generally dominated by riffles with scarce amounts of large woody debris, few quality pools, and relatively little spawning gravel. Inventories have documented that the proposed project area (approximate river miles 1.25-1.50 and 2.75-4.0 of North Fork Eagle Creek) presently contains poor to fair anadromous fish habitat.

Coho and spring chinook salmon, winter steelhead trout, resident and sea-run cutthroat trout all inhabit the project area. Non-salmonid fishes found in the watershed are sculpin, longnose dace and Pacific lamprey. Due to the relatively poor condition of the habitat, salmonid fish production is believed to be well below its potential.

Fish stocks found in North Fork Eagle Creek that have Threatened or Endangered listing status are:

(1) Lower Columbia River steelhead trout (federally listed: threatened)
(2) Upper Willamette River chinook salmon (federally listed: threatened)
(3) Lower Columbia River/SW Washington cutthroat trout (proposed for federal listing)
(4) Lower Columbia River coho salmon (state listed: threatened)

C. Soils

Soils in the upper slopes of the watershed formed in colluvium derived from andecite and basalt, mixed with volcanic ash. Soils in the lower slopes of the watershed formed in older alluvium and colluvium. The soils within the project area are located on rolling hills and high terraces.

They are, primarily deep, well drained soils that formed in old alluvium and in colluvium, derived dominantly from andesite and tuff. Since permeability is moderately slow, the runoff from these soils can be rapid and the hazard of water erosion severe, especially on slopes exceeding 30%. All of the source trees for this project would come from areas with slopes less than 30%.

D. Hydrology

Agriculture upstream from the proposed project site has resulted in conversion of a large percentage of the watershed from forest to fields and pastureland.

This conversion and heavy past timber harvesting has altered the runoff patterns in the watershed, and the hydrologic regime in Eagle Creek. The timber harvest and associated road construction, often followed by aggressive logging debris stream cleaning projects, have reduced the channel complexity and the ability of the stream to effectively dissipate the energy associated with high flows.

Neither North Fork Eagle Creek nor mainstem Eagle Creek is listed in *DEQ's 1998 303(d) list of Water Quality Limited Waterbodies*. The Clackamas River is listed as water quality limited for summer stream temperatures from the mouth to River Mill Dam in *DEQ's 1994/1996 303(d) list of Water Quality Limited Waterbodies*.

Beneficial water uses downstream from the project area (mainstem Eagle Creek) are predominantly fisheries and irrigation. Numerous diversions for domestic and irrigation use are present on Eagle Creek. A summary of beneficial uses and water rights with approximate distances downstream from the proposed project area is listed in the table below:

Stream	Location		Beneficial Use	Distance Downstream
Eagle Creek	T.3S R.4E	Sec. 10	Fisheries (aquaculture)	3 mi.
		Sec. 4	Irrigation (4 permits)	4 mi.
		Sec. 5	Industrial	5 mi.
	T.2S R.4E	Sec. 31	Irrigation	7 mi.

E. Vegetation

Vegetation in the riparian areas is dominated by hardwoods, with an overstory of alder, bigleaf maple, and cottonwood with scattered second-growth Douglas fir, western hemlock and western red cedar. The understory consists of vine maple, salmonberry and huckleberry, with a ground cover of oxalis, sword ferns, oregon grape, salal and mosses. The uplands generally consist of Douglas fir plantations with mixed western red cedar, nine-bark, salal and sword fern.

The hardwood dominated overstory is the result of logging that occured in the 1930's. Down woody material and snags are rare with snags being generally less than 12 inches in diameter and primarily hardwood, and down logs being in two classes: large, highly decayed Douglas fir or western red cedar logs, and small, recently down hardwood logs.

Botanically the project area is diverse. The area contains several riparian community types along the reaches of North Fork Eagle Creek included in the project.

The communities that are represented can be characterized by the dominant species present as well as by differences in soil and rock. The riparian areas contain rocky outcrops, upland soils and sandy soils. The rocky outcrops are dominated by mosses, liverworts and lichens. Upland soil areas are dominated by Douglas fir with mixed western red cedar, nine-bark, salal and sword fern. The low areas with sandy soils are dominated by a mix of red alder, big-leaf maple, salmonberry, stink currant, false lily-of-the-valley and Scouleri's corydalis.

F. Terrestrial Wildlife - Including T/E Species

The project area is used by wildlife for a variety of purposes. The habitat in the vicinity of the proposed project consists mostly of mixed hardwood conifer stands in younger age classes under 60 years of age. Many special status species are associated with older forest habitats. There is a lack of older forest habitat in the vicinity. Timing of the project is scheduled after the primary nesting/breeding season for birds (March 1-July 31).

The northern spotted owl, federally listed as 'threatened', is a species typically associated with older forests. No modification of suitable spotted owl habitat would result from this proposal and this project is disturbance only in nature. There is a lack of suitable habitat present within .25 miles of the project area, and the project area is located in or near the Willamette Valley Physiographic Province, which is not considered to be in the normal range of the spotted owl.

G. Cultural Resources

No cultural sites are known to exist in the project area, however, a cultural inventory would be conducted prior to any ground disturbing activities in the tree source areas.

IV. CHAPTER 4 - ENVIRONMENTAL EFFECTS

A. Critical Element Evaluation of Each Alternative

This section describes the scientific and analytical basis for the comparison of the alternatives, and the probable Effects as they relate to the alternatives. The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5: Critical Elements of the Human Environment).

Environmental Feature		Affected/ Not Affected / N/A (not present within the project area)		Remarks / References EA chapter (Ch.) , section (sec.)
		No Action	Proposed Action	
Air Quality		Not Affected		
Areas of Critical Environmental Concern (ACEC)		N/A		
Cultural, Historic, Paleontological		Surveys will take place prior to ground disturbing activities		Ch. III, sec. G Ch. IV, sec. C 6
Prime or Unique Farm Lands		N/A		
Flood Plains		N/A		
Native American Religious Concerns		N/A		
Threatened or Endangered	Plants	N/A		
	Terrestrial Wildlife	Affected		Ch. III, sec. F Ch. IV, sec. C 5
	Fisheries	Affected		Ch. III, sec. B Ch. IV, sec. C 1, Appendix B
Hazardous or Solid Wastes		N/A		
Water Quality (Surface and Ground)		Not Affected	Affected	Ch. III, sec. C, D Ch. IV, sec. C 3 Appendix B
Wetlands or Riparian Zones		Affected		Appendix B
Wild and Scenic Rivers		N/A		
Wilderness		N/A		
Invasive, Nonnative Species		Not Affected		
Environmental Justice		N/A		

B. Evaluation of Consistency with Eagle Creek Watershed Analysis - Proposed Action

The proposed action is consistent with the Restoration Needs recommended by the WA on pages 97 and 103. Specifically, increasing woody debris levels and improvement of aquatic and riparian habitat function, complexity and connectivity on BLM and private lands in the North Fork subwatershed.

C. Comparing the Environmental Effects of Alternatives by Resource

(1) Aquatic Habitat/Fisheries - Including T/E Species

Direct and Indirect Effects

a. Turbidity

No-action Alternative: None.

Proposed Action: Very slight increases in turbidity in North Fork Eagle Creek may be associated with the helicopter placement of trees and logs. Effects of the increased turbidity on fish, other aquatic organisms and other water users would be minimal particularly because the source of turbidity is primarily river deposits of sand and gravel which sort out quickly, and not silt and clay which remain in suspension for long periods of time.

b. Sediment & Large Woody Debris Routing

No-action Alternative: The current rate that sediment and large woody debris would route through the system would be maintained.

Proposed Action: Very slight, short-term increases in suspended sediment levels in North Fork Eagle Creek may be associated with the helicopter placement of trees and logs. The placement of additional large woody debris in North Fork Eagle Creek is expected to reduce the rate of wood routing through the aquatic system by trapping driftwood and creating log jams.

c. T/E Species - Section 7 Consultation with National Marine Fisheries Service

Section 7 consultation with the National Marine Fisheries Service (NMFS) for Lower Columbia River steelhead trout and Upper Willamette River chinook salmon has been conducted programmatically under the June 3, 1999, Opinion for the Lower Columbia River Province (OSB99-0108) and the July 28, 1999, Opinion for the Upper Willamette Province (OSB99-0152), both of which have extensions of their respective Incidental Take Statements that are valid through September 30, 2002. The design features of the proposed action are consistent with the Terms and Conditions of NMFS' Biological Opinions.

Measurable Factors/Indicators and ACS Objectives: Appendix B shows the relationships among the nine Aquatic Conservation Strategy (ACS) objectives (RMP), the measurable factors/indicators developed by National Marine Fisheries Service, and site-specific impacts of the Proposed Action.

Cumulative Effects - Aquatic Habitat/Fisheries, Including T & E Species

No-action Alternative: None

Proposed Action: No cumulative effects to turbidity are expected due to the short-term nature of the project, and the rapidity with which suspended particles are likely to drop out of the water column.

Beneficial Effects

No-action Alternative: Current aquatic habitat conditions will be maintained. There would be no improvement in aquatic habitat conditions.

Proposed Action: Helicopter placement of up to 60 trees and logs would increase the large woody debris (LWD) loading level within the stream channel which would improve fish habitat quality in approximately two miles of stream on private land upstream of public land, and subsequently increase fish production throughout the stream.

The beneficial effects to fish, wildlife, and plant species associated with the proposed action activities will include, but are not limited to the following:

- Increases in the complexity and abundance of habitat for salmonid fishes.
- Increases in the composition, diversity, and abundance of macroinvertebrate species

(2) Soils

Direct and Indirect Effects

No-action Alternative: None.

Proposed Action: In the source tree areas, excavation will take place around the bases of trees in order to loosen the rootwads. At excavated sites the soils would be susceptible to water erosion on slopes greater than 30%. All of the source trees for this project are expected to come from flat areas with slopes less than 30%, resulting in minimal levels of soil erosion by water. Soil disturbance and compaction would be reduced by helicopter removal and placement of trees.

***Cumulative Effects - Soils*:** None.

(3) Hydrology

Direct and Indirect Effects

No-action Alternative:: The expected dissipation of the energy of high flows and increases in water and nutrient retention as a result of the proposed action would not take place.

Proposed Action: Direct effects of the project on hydrology would be dissipation of the energy of high flows, increased retention rates of water and nutrients and decreased rates of bedload movement.

No effect on stream temperature is expected from the falling of hardwood trees at the placement sites due to small area affected.

Cumulative Effects - Hydrology

No-action Alternative: see direct and indirect effects, above.

Proposed Action: Rates of routing of wood and sediment would be re-established in the drainage. The stream and downstream reaches would adjust over time to a new equilibrium.

(4) Vegetation

Direct and Indirect Effects

No-action Alternative: None.

Proposed Action: Some disturbance of vegetation would occur at source tree sites and on excavator paths to the source trees. Some breakage of riparian hardwood branches is expected at the log placement sites. Removal of individual trees to be used for the project would create openings in the canopy, which would promote understory growth until the removal of the rest of the canopy in a regeneration harvest. The removal of groups of trees, whether solely for this project or as part of a timber sale would convert the timber stand from a mid seral stage to an early seral stage which would happen soon regardless since the rotation age of timber on private industrial timberlands ranges from 40 to 60 years.

***Cumulative Effects - Vegetation*:** None.

(5) Terrestrial Wildlife - Including T/E Species

Direct and Indirect Effects

No-action Alternative: None

Proposed Action: There is a lack of older forest habitat in the vicinity. Timing of the project is scheduled after the primary nesting/breeding season. Due to project timing and minimal impacts to special status species habitats, this proposal would have minimal impacts and would not contribute to the need to list any special status species.

T/E Species - Section 7 Consultation with US Fish and Wildlife Service

Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) for the northern spotted owl has been initiated under the FY2002 Programmatic Disturbance and Habitat Modification Biological Assessments. This project was determined to have no effect on the northern spotted owl due to the timing of the project after the critical nesting season (March 1-July 15) and the project location in North Fork Eagle Creek, where there is a lack of suitable habitat for the spotted owl. No modification of suitable spotted owl habitat would result from this proposal.

Cumulative Effects - Terrestrial Wildlife, Including T & E Species: None

(6) Cultural Resources

No-action Alternative: There are no environmental effects for cultural resources under the No-action alternative.

Proposed Action: It is not expected that cultural resources will be affected by the Proposed Action. If cultural resources are detected that may be affected by excavation at source tree sites, mitigation measures would be implemented.

V. CHAPTER 5 - LIST OF AGENCIES AND COOPERATORS, LITERATURE CITED, AND LIST OF PREPARERS

A. List of Agencies and Cooperators

Oregon Department of Fish and Wildlife
Department of Environmental Quality
Forest Service - Clackamas River Ranger District, Mt. Hood Natl. Forest
Clackamas River Basin Council
Longview Fibre Company
Friends of Eagle Creek

B. Literature Cited

ODFW (unpublished), 1998. Aquatic Inventory Project, Stream Report. North Fork Eagle Creek.

USDA- Forest Service and USDI- Bureau of Land Management, 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl. 74 p.

USDA- Forest Service, Mt. Hood National Forest and USDI-Bureau of Land Management, Salem District, 1995. Eagle Creek Watershed Analysis. 113 p. plus appendices.

C. List of Preparers and Contributors

Resource	Name	Title	Initial	Date
Cultural Resources	John Caruso	Natural Resource Specialist	JRC	5/15/02
Hydrology/ Water Quality	Patrick Hawe	Hydrologist	PH	5/13/02
Riparian Ecology	Dave Rosling	Riparian Ecologist	DER	5/15/02
Botany TES and Special Attention Plant Species	Terry Fennell	Botanist	TCF	5/14/02
Wildlife TES and Special Attention Animal Species	Jim England	Wildlife Biologist	JSE	5/13/02
Fisheries	Dave Roberts	Fishery Biologist	DAR	5/13/02
Soils	John Caruso	Natural Resource Specialist	JRC	5/15/02
NEPA / Plans	Carolyn Sands	Natural Resource Specialist	CCS	5/16/02

VI. CHAPTER 6: APPENDICES

A. Appendix A: Wyden Authority

(1) Section 124 Omnibus Consolidated Appropriations Act of 1997, PL 104-208

SECTION 124. Watershed Restoration and Enhancement Agreements. --
(a) In General.-- For fiscal year 1997 and each firetary to enter into a watershed restoration and enhancement agreement--

(1) the agreement shall--
   (A) include such terms and conditions mutually agreed to by the Secretary and the landowner;
   (B) improve the viability of and otherwise benefit the fish, wildlife, and other biotic resources on public land in the watershed;
   (C) authorize the provision of technical assistance by the Secretary in the planning of management activities that will further the purposes of the agreement;
   (D) provide for the sharing of costs of implementing the agreement among the Federal government, the landowner, and other entities, as mutually agreed on by the affected interests; and
   (E) ensure that any expenditure by the Secretary pursuant to the agreement is determined by the Secretary to be in the public interest; and

(2) the Secretary may require such other terms and conditions as are necessary to protect the public investment on private lands, provided such terms and conditions are mutually agreed to by the Secretary and the landowner.

(3) SECTION 136 of the Interior Appropriations Act PL 105-277

Section 136. WATERSHED RESTORATION AND ENHANCEMENT AGREEMENTS. Section 124(a) of the Department of the Interior and related agencies Appropriation Act, 1997 (16 U.S.C. 1101(a) is amended by striking "with willing private landowners for restoration and enhancement of fish, wildlife, and other biotic resources on public or private land or both" and inserting "with the heads of other Federal agencies, tribal, State, and local governments, private and nonprofit entities, and landowners for the protection, restoration and enhancement of fish and wildlife habitat and other resources on public or private land and the reduction of risk from natural disaster where public safety is threatened".

(4) IMPLEMENTATION CRITERIA FOR SECTION 124 OF PL 104-208

WATERSHED RESTORATION AND ENHANCEMENT AGREEMENTS

INTRODUCTION

Section 124 of the Omnibus Consolidated Appropriations Act of 1997, PL 104-208, provides the framework by which the Bureau of Land Management (BLM) may enter into watershed restoration and enhancement agreements. Section 136 of the 1999 Interior Appropriations Act of 1998, PL 105-277 amended the 1997 language to include agreements "with the heads of other Federal Agencies, tribal, State, and local governments, private and nonprofit entities, and landowners for the protection, restoration and enhancement of fish and wildlife habitat and other resources on public or private land and the reduction of risk from natural disaster where public safety is threatened".

Watershed restoration and enhancement agreements may be developed directly with a willing private land owner/manager, or indirectly through a state, local, or tribal government or other public entity, educational institution, or private nonprofit organization. Such an agreement may incorporate any instrument including conveyance of an easement, other land use agreement, cooperative agreement, contract, or purchase order used for the purpose of defining mutual responsibilities and any terms and conditions for project installation and maintenance.

PURPOSE

The language in Sections 124 and 136 does not significantly change BLM's existing authorities but it has provided a high degree of visibility to BLM as a potential source of funding for watershed restoration efforts. Applying a consistent national strategy for evaluating and approving requests for funding to assure that BLM appropriations are used to provide the greatest benefit to biotic resources on public land is a priority in management decisions.

The purpose of this document is to provide BLM field offices with guidance in evaluating project proposals to ensure that any expenditure of funds on private or state lands provide direct benefits to biotic resources on public land in the same watershed and that such an expenditure is in the public interest.

GENERAL POLICY

The BLM should continue to be an active participant in watershed restoration efforts where BLM administered public land is present.

BLM's involvement in such watershed efforts should include providing technical advice and assistance, working with other interests to develop the watershed plan, and assuring that watershed analysis, or similar assessment and monitoring criteria, are part of the overall plan. BLM's first priority should be the management of public land to protect and sustain biotic resources administered by BLM. Consistent with this priority, BLM should, to the extent possible, participate in watershed restoration or enhancement agreements that directly benefit biotic resources on public land administered by BLM within the watershed. The BLM will consider funding on-the-ground projects on private and state lands within the watershed that provide direct benefits to biotic resources on public land when funds to achieve restoration goals for such work are unavailable or are insufficient from the Environmental Protection Agency, Bureau of Reclamation, Natural Resource Conservation Service, US Fish and Wildlife Service, or other federal agencies, state agencies, and non - government organizations. Such work must be compatible with established Resource Management Plans, PACFISH, the President's Forest Plan, or similar strategies and must support the overall goal of watershed restoration.

PROJECT SELECTION CRITERIA

Projects considered for implementation under watershed restoration and enhancement agreements described in Section 124 of PL 104-208 should be identified as a high priority for restoring or enhancing biotic resources on public land through watershed or ecosystem analysis or other appropriate methods of assessment or evaluation. BLM offices are encouraged to consult with Resource Advisory Councils and Provincial Advisory Committees, Soil and Water Conservation Districts, and Watershed Councils, or similar entities in establishing project priorities or priority areas. Projects must meet the Minimum Requirements in order to be evaluated for funding through application of Evaluation Criteria.

Minimum Requirements: Minimum requirements for funding or cost-sharing projects on private land include the following:

a) BLM has funds available to enter into such agreements and the expenditure of those funds on the project must be in the public interest.
b) The project must have direct benefit to biotic resources on public land administered by BLM within the watershed and must be more critical to the health of those biotic resources than the effect that work on public land would have on those resources.
c) The land owner or manager, acting individually or as part of a group or other organization, must be a willing, voluntary participant.
   The private landowner/manager should be willing to cooperate in the implementation and maintenance of the project; understand the terms and conditions of the watershed restoration and enhancement agreement, and be committed to complying with the objectives of the project throughout the anticipated life span of work funded by BLM.

Each cooperating landowner/manager will sign a legally binding agreement (such as an easement or other conveyance document) with BLM to protect the taxpayers' investment before work begins on the land.

d) The project must comply with all applicable federal, state, and local laws, regulations, policies and permit requirements [e.g., National Environmental Policy Act (NEPA), Clean Water Act (CWA), Endangered Species Act (ESA), Federal Property and Administrative Services Act, Grants and Cooperative Agreement Act, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of January 2, 1971, etc.].

Evaluation Criteria

Criteria to be considered in determining the appropriateness and priority of a project should include:

a) The potential to improve the viability of listed or proposed species or species of special status on public land in the watershed.
b) The degree of support it provides for previous BLM activities or expenditures and BLM management objectives.
c) The degree to which work will be accomplished on private and state land that is interspersed, intermingled, or adjacent to public land administered by BLM.
d) The commitment of other cooperators (agencies, groups) to fund project design, implementation and/or maintenance through cost-sharing or contributions of goods and services.
e) The degree to which the proposed work meets the goals and objectives of the local Watershed Council's or similar entity's strategy for watershed management. (These goals and objectives must be compatible with BLM's goals and objectives for managing biotic resources on public land.)
f) The degree to which funds appropriated to other federal agencies or from other sources for projects on private land can be used to jointly fund the work.
g) The willingness of the cooperating landowner/manager to donate easement interests to BLM or a participating nonprofit for the duration of the project.

DOCUMENTATION

BLM will document how its decision on each request for funding work on private land is made. Such documentation will include, at a minimum, a brief summary of how the project met, or did not meet, the Minimum Requirements and Evaluation Criteria described above.

The recipient of BLM funds will document expenditure of those funds in accordance with the terms and conditions of the appropriate funding agreement. The terms and conditions specified in such agreements will protect public investment on private land.

A written agreement between the private land owner/manager and the BLM is required in addition to any overall agreement with a participating organization.

RESPONSIBILITY

The responsibilities of the cooperating land owner/manager in the protection of the public investment will be set forth in the terms and conditions of the appropriate instrument developed to implement the watershed restoration and enhancement agreement. Appropriate terms and conditions will be developed jointly by the BLM technical personnel designing the project and the acquisition and/or lands staff.

The State Director will be responsible for assuring that BLM appropriations are being spent in the public interest and on projects that directly benefit the health of biotic resources on public land.

MONITORING

The BLM contracting/assistance officer is responsible for monitoring compliance with the terms and conditions of any funding agreement. The technical project manager is responsible for monitoring project completion and may monitor overall effectiveness.

B. Appendix B - Consistency with Aquatic Conservation Strategy (ACS) Objectives and Factors/Indicators (NMFS)

ACS Objectives - Northwest Forest Plan	Factors/ Indicators (NMFS)	Design Features and Impact Analysis
2,4,8,9 Design features will maintain spatial and temporal connectivity within the drainage network with regard to shade and water temperature (ACS#2), maintain water quality with respect to temperature (ACS#4), maintain vegetation for adequate summer/winter thermal regulation for aquatic species (ACS#8), and therefore maintain habitat for well-distributed riparian-dependent populations (ACS#9).	Water Quality / Temperature	Although selected riparian alders would be felled to provide visibility of the log placement sites for the helicopter pilot, the sites at which this would take place have complete canopy closure over the stream. Removal of carefully selected alders will have no direct effect on stream temperature.
4,5,6,8,9 Design features will maintain water quality (ACS#4) in the long term, may slightly degrade turbidity in the short term, but maintain the sediment regime in the long term (ACS#5), maintain instream flows to retain patterns of sediment routing (ACS#6), maintain vegetation to provide adequate rates of erosion (ACS#8), and therefore maintain habitat for well-distributed riparian-dependent populations (ACS#9).	Water Quality / Sediment / Turbidity	No post-project effects to water quality from sediment or turbidity are expected from the source tree areas due to the low slope of the ground (<30%). Turbidity during the project is unlikely to be above summer background levels. Riparian vegetation would be maintained on all streams within the project area except for the alders cut to provide visibility of the placement sites.
4,6,8,9 Design features will maintain water quality with regard to chemical concentration/ nutrients (ACS#4), maintain instream flows to retain patterns of nutrient routing (ACS#6), maintain vegetation to provide adequate nutrient filtering (ACS#8), and therefore maintain habitat for well-distributed riparian-dependent populations (ACS#9).	Water Quality / Chemical Concentration / Nutrients	Except for the alders cut to provide visibility of the placement sites, riparian vegetation would be maintained on all streams within the project area to maintain the natural input of organic material into streams. The proposed action involves no use of heavy equipment in proximity to a stream channel.
2,9 Design features will restore spatial and temporal connectivity within the drainage network (ACS#2) and therefore maintain habitat for well-distributed riparian-dependent populations (ACS#9).	Habitat Access / Physical Barriers	The project would not create any barriers to migration or connectivity within the drainage network. The debris jams created would not be anchored to the streambed in any way, allowing them to shift with changing river stages, ensuring that fish passage would always exist.

ACS Objectives - Northwest Forest Plan	Factors/ Indicators (NMFS)	Design Features and Impact Analysis
3,5,6,8,9 Design features will maintain the sediment regime in the long term (ACS#5), maintain instream flows to retain patterns of sediment routing (ACS#6), maintain vegetation to provide adequate rates of erosion, and to supply coarse woody debris sufficient to sustain physical complexity and stability (ACS#8), and therefore maintain habitat for well-distributed riparian-dependent populations (ACS#9).	Habitat Elements / Sediment	The debris jams created by the project would allow for more sediment storage than currently exists in the stream system. Riparian vegetation would be maintained on all streams within the project area except for the alders cut to provide visibility of the placement sites.
6,8,9 Design features will maintain instream flows to retain patterns of wood routing (ACS#6), maintain vegetation to provide a supply of coarse woody debris (ACS#8), and therefore maintain habitat for well-distributed riparian-dependent populations (ACS#9).	Habitat Elements/ Large Woody Debris	The debris jams created by the project would serve to trap wood that currently moves through the stream system. No removal of large wood from the stream channel or adjacent riparian areas would occur, maintaining the potential recruitment of large wood from debris torrents, landsliding, and windthrow.
2,3,5,8,9	Habitat Elements / Pool Area (%)	The proposed action is expected to increase pool frequency and pool area within the project area.
2,3,5,6,9	Habitat Elements / Pool Quality	The proposed action is expected to improve the depth and complexity of existing pools as well as create additional quality pools within the project area.
1,2,3,6,7,8,9	Habitat Elements / Off-Channel Habitat	Some improvement of off-channel habitat is expected as a result of the project. Although off-channel habitat is currently scarce, some of the wood placements are intended to increase the quality of existing secondary channels by increasing their flow, complexity and cover characteristics.
1,2,3,5,6,8,9	Channel Condition & Dynamics/ Width/Depth Ratio	The proposed design would accommodate the active channel dimensions of Boulder Creek, thereby helping to restore the sediment transport process and appropriate W/D ratios. Removing the lateral and vertical constraint imposed by the existing culvert could [at least temporarily] result in downstream aggradation as the stream cuts its way through the in-channel sediment deposit immediately upstream of the 35-14-10.0 road crossing. However, the project would not result in additional sediment delivery from out-of-channel sources, and the design incorporates gradient-control structures to provide for the timely release of the accumulated sediment to protect the channel condition downstream.

ACS Objectives - Northwest Forest Plan	Factors/ Indicators (NMFS)	Design Features and Impact Analysis
3,5,6,8,9	Channel Condition & Dynamics / Streambank Condition	The proposed action would not involve the removal of streamside vegetation or disturbance of streambanks.
1,2,3,6,7,8,9	Channel Condition & Dynamics / Floodplain Connectivity	Some of the debris jams created by this project are intended to improve floodplain connectivity in North Fork Eagle Creek.
1,2	Watershed Condition / Road Density & Location	The proposed action does not affect road density or location.
1,2,5,8,9	Watershed Condition / Disturbance History	Trees used for instream placement for the project will be taken from already disturbed sites on private land upon which typical rotation age is 50 years or less.
1,3,5,8	Watershed Condition / Landslide and Erosion Rates	Trees used for instream placement for the project will be taken from stable, low-gradient areas.
1,2,4,8,9	Watershed Condition / Riparian Reserves	The project area is private industrial timberland and does not include any Riparian Reserves or federally-managed lands. Riparian vegetation (except for selected alders felled for visibility) would be maintained on all streams to provide shade, large wood recruitment, habitat protection and connectivity.

Conclusion

The proposed project was determined to be consistent with Watershed Analysis recommendations and findings, applicable Northwest Forest Plan Standards and Guidelines, NEPA Documentation, and applicable aspects of NMFS' 1999 Biological Opinions (See Project File). In addition, the proposed project would not hinder or prevent attainment of Aquatic Conservation Strategy objectives at the 5th field watershed scale over the long-term.

C. Appendix C - Project Map

C. Appendix C - Project Map